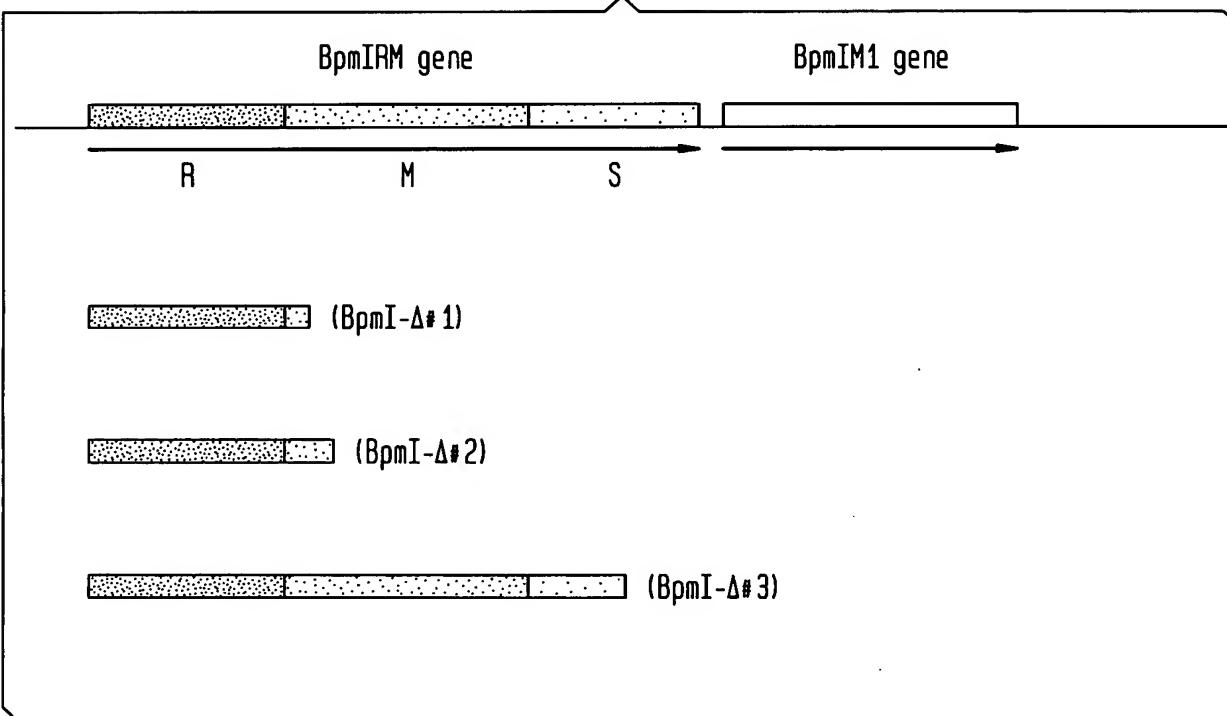




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FIG. 1



**FIG. 2A**

1	ATGAATCAATTAAATTGAAAATGTTAACACAAAAATTAGGGGTGGGTATTACACCCCT	60
61	M N Q L I E N V N L Q K L R G G Y Y T P AAAGTTATTGCTGACTTTTATGTCATGGAGTATTCAAGATGACACAAAGAGTGTACTT	120
121	K V I A D F L C Q W S I Q D D T K S V L GAACCCAGTTGGAGATGGTAATTATTGAATCGGCAATACTTAGGTTCAAAGAACCTT	180
181	E P S C G D G N F I E S A I L R F K E L AGTATAGATAATGAACAACCTAAAGGAAGAATTACAGGAGTAGAGCTAATTGAAGAAGAA	240
241	S I D N E Q L K G R I T G V E L I E E E GCTTGAAAGTTCAAAATCGAGCAAATGAGTTGGGGGTTGATAAAAACCTCAATAGTAAAT	300
301	A L K V Q N R A N E L G V D K N S I V N AGTGACTTCTTCAATTGTAAAGATAATAAGAATAAAAAATTGATACTATTATTGGT	360
361	S D F F Q F V K D N K N K K F D T I I G AATCCACCATTATAAGATACCAAAACTTCTGAAGAGCATCGTAGTATAGCCATGGAA	420
421	N P P F I R Y Q N F P E E H R S I A M E ATGATGGAGGAACTAGGTTAAAACCTAATAAACTTACAAATATCTGGTTCCATTCTA	480
481	M M E E L G L K P N K L T N I W V P F L GTGGTATCTGCTACATTACTTAATGAACAAGGAAAGATGGCTATGGTTACCGGCTGAA	540
541	V V S A T L L N E Q G K M A M V I P A E TTATTCAGGTAAGTATGCAGCAGAAACAAGAATTTCATCAAAGTTTCGATCGT	600
601	L F Q V K Y A A E T R I F L S K F F D R ATCACTATAATTACATTGAAAAACTGTTTTGAAAATATCCAACAGGAAGTTACTA	660
661	I T I I T F E K L V F E N I Q Q E V I L CTTCTTGTGAAAGAAAGTTAATAAAGGTAAAGGAATTGGTTATTGAATGCGAGAAC	720
721	L L C E K K V N K G K G I R V I E C E N TTAGATGGATTAAATTCCATTGATTTTAGCTATAATGGTCAAATGTTAAACCTATT	780
781	L D G L N S I D F V A I N G S N V K P I GAACACCGTACTGAAAAGTGACAAAGTATTCTAACGAAGATGAAATACTTCTTTA	840
841	E H R T E K W T K Y F L N E D E I L L L CAGAGTTAAGGAAGACAAACGCGTAAAAATTGTAATGACTATTAAAGACAGAAGTT	900
901	Q S L K E D K R V K N C N D Y F K T E V GGCTTAGTTACTGGACGAAACGAATTCTTATGATGAAAGAAAACCAAGTAAAAGAATGG	960
961	G L V T G R N E F F M M K E N Q V K E W AATCTAGAAGAATATAACATACCTGTTACAGGTAGGTCCAATCAGTAAAAGGTATAACA	1020
	N L E E Y T I P V T G R S N Q L K G I T	

**FIG. 2B**

1021	TTTACAGAAAATGATTTCATGAAATTCAATGGAACAAAAGGCAATTACCTATTTG F T E N D F H E N S M E Q K A I H L F L CCACCAGATGAAGATTTGAAAAGTTACCGATTGAGTGTCAAAATTATATCAAGTATGGG	1080
1081	P P D E D F E K L P I E C O N Y I K Y G GAAGAAAAAGGCTTCCATCAAGGCTATAAAACAGAATTAGAAAACGTTGGTATATAACT	1140
1141	E E K G F H Q G Y K T R I R K R W Y I T CCATCTAGATGGGTTCCAGATGCTTTGCTTAAGACAGGTTGATGGCTATCCAAAACTA	1200
1201	P S R W V P D A F A L R Q V D G Y P K L ATTTAAATGAAACCGACGCTTCTTACTGATAACAATTACATAGGGTTAGATTAAAGAA	1260
1261	I L N E T D A S S T D T I H R V R F K E GGTATAAAATGAAAAGTTAGCCGTAGTTCATTTGAACTCACTCACTTTGCATCTCA	1320
1321	G I N E K L A V V S F L N S L T F A S S GAAATAACGGGGAGAAGTTATGGTGGTGGTTATGACATTGAAACCAACTGAAATTGGA	1380
1381	E I T G R S Y G G G V M T F E P T E I G GAAATCCTAATACCTTCTTGATAACTTACATTGATTTGATAAAATTGATGCCTTA	1440
1441	E I L I P S F D N L S I D F D K I D A L ATTGAGAAAAGGAGATTGAAAAAGTCCTGATATTGTTGATGAAGCTTACTTATAAAA	1500
1501	I R E K E I E K V L D I V D E A L L I K TATCATGGGTTAGTGAGAAAGAAGTAAACAGCTTCGAGGGATATGGAAGAAACTTCT	1560
1561	Y H G F S E K E V K Q L R G I W K K L S CAGAGAAGAAACAATAGAACGAAGAAATAA (SEQ ID NO: 1)	1620
1621	Q R R N N R T K K * (SEQ ID NO: 2)	1650

**FIG. 3A**

ATGCATATAAGTGAGTTAGATATAACAAAGCGCATAGAAGTACTTTTTAAACCA  
 1 M H I S E L V D K Y K A H R S T F L K P  
 ACTTATAATGAAACTCAACTAAGGAATGATTATAGACCCACTTCTAAAATCTTAGGA  
 61 T Y N E T Q L R N D F I D P L L K S L G  
 TGGGATGTTGATAATACCAAAGGAAAAACACATATTCTAAGAGATGTCAAGAAGAA  
 121 W D V D N T K G K T H I L R D V I Q E E  
 TACATAGAAATAAAAGATGAGGAGACAAAGAAAAATCCAGATTATACTTCGTATAAAC  
 181 Y I E I K D E E T K K N P D Y T L R I N  
 GGTACGAGAAAAGCTGTTGAGAGGTTAAGAAAACCGTCTTTAATATTTGAAATCAGCT  
 241 G T R K L F V E V K K P S F N I L K S A  
 AAAGCAGCCTTCCAACAAAGAAGATATGGTGGAGTGTAACCTGGTATTCAGTACTT  
 301 K A A F Q T R R Y G W S A N L G I S V L  
 ACAAAATTGAGCATCTAGTTATTATGATTGAGATATAACGCCTGACAAATCCGACAAT  
 361 T N F E H L V I Y D C R Y T P D K S D N  
 GAACATATTGCTAGATATAAGTTCTCTTACGAGGAATATGAAGAACATTTGATGAA  
 421 E H I A R Y K V F S Y E E Y E E A F D E  
 ATAAGGATATAATTTCATATGAGTCAGCCAACACTAGGTGCTCTGGACGAAATGTTGAT  
 481 I K D I I S Y E S A N S G A L D E M F D  
 GTAAATACAAGAGTTGGTGAACGTTGACGAGTATTTTACAGCAAATTGAGAATTGG  
 541 V N T R V G E T F D E Y F L Q Q I E N W  
 CGCGAAAAGCTAGCTAAACTGCAATTAAAAAACACCGAATTAGGTGAAGAGGACGTC  
 601 R E K L A K T A I K N N T E L G E E D V  
 ATTATTTGTCAGACTATTAAACAGAATTATTTCTTAGAGTTGAGATAGATA  
 661 N F I V Q R L L N R I I F L R V C E D R  
 ACCATTGAAAAATATGAAACAATTAAAGTATAAAAACATATGAGGAATTAAAGATCTG  
 721 T I E K Y E T I K S I K N Y E E L K D L  
 TTCAAAAGCTGATAGGAATTAACTCAGGTCTTTGACTTCATAGATGATACGCTC  
 781 F O K S D R K F N S G L F D F I D D T L  
 TTGCTTGAGGTTGAATTGATTCGAATGTATTGATAGAAATTAGTGTATTATTC  
 841 L L E V E I D S N V L I E I F S D L Y F  
 CCACAAAGCCCATAATGATTTCTGTTGTCGATCCAACAATTAAAGCCAGATATGAA  
 901 P Q S P Y D F S V V D P T I L S Q I Y E  
 CGTTTCTAGGTCAAGAAATAATTATAGAGTCAGGTGGTACATTACGAGTC  
 961 R F L G Q E I I I E S G G T F H I T E S

**FIG. 3B**

1021	CCAGAAGTTGCGCGTCCAATGGTGTTCACCTCCAAAATTATCGTCGAACAGATA P E V A A S N G V V P T P K I I V E Q I GTGAAAGACACTTAACGCCCTAACGGAGCAAAAAATTAAATGAGCTATGTAACCTA	1080
1081	V K D T L T P L T E G K K F N E L C N L AAAATAGCAGATATATGTTGTGGATCAGGAACCTTCCTAATTCAAGTTATGACTTCTA	1140
1141	K I A D I C C G S G T F L I S S Y D F L GTAGAGAAAAGTAATGGAAAAGATAATAGAAGAGAACATCGATGATTAGATTAGTATAT	1200
1201	V E K V M E K I I E E N I D D S D L V Y GAAACTGAAGAAGGGCTAATTGACACTAAAGCAAAAAGAAATATCTGGAGAATAAT	1260
1261	E T E E G L I L T L K A K R N I L E N N TTGTTTGGTGTGATGTTAACATCCACGCTGTTGAAGTAGCTGAGTTAGCTTATTATA	1320
1321	L F G V D V N P Y A V E V A E F S L L AAGCTATTAGAAGGTGAGAATGAGGCATCGGTTAACATTACGAGCATGAGGAT	1380
1381	K L L E G E N E A S V N N F I H E H E D AAAATATTACCGGATTAAACATCTATTAAATGTGGAAACAGCTTAGTAGATAATAAG	1440
1441	K I L P D L T S I I K C G N S L V D N K TTTTTGAAATTATGCCAGAACATCGTTAGAGGACGATGAAATCTTATTAAAGGCTAACCA	1500
1501	F F E F M P E S L E D D E I L F K A N P TTTGAATGGGAAGAGGAGTTCCAGATATTATGGCAAATGGCTTGTGCTATTATA	1560
1561	F E W E E E F P D I M A N G G F D A I I GGAAATCCACCTATGTTGAATACAGAACATGAAAAATAAGTCCTGAGGAAATTGAA	1620
1621	G N P P Y V R I Q N M K K Y S P E E I E TATTATCAATCAAAGACTCTGAATATACTGTTGCAAAAAAGAACAGTTGACAAGTAT	1680
1681	Y Y Q S K D S E Y T V A K K E T V D K Y TTTTTATTATTGAGAGAGCTTAATATTACTCAATCCTACTGGGCTGTTGGGTTATATA	1740
1741	F L F I E R A L I L L N P T G L L G Y I ATACCGCATAAATTCTTATTACAAAAGGTGGTAAGGAACATAAGAAAGTTCATAGCTGAA	1800
1801	I P H K F F I T K G G K E L R K F I A E AAACATCAAATCAAATTATAAATTGGTGTACACAGGTCTTCAGGAAGAGCG	1860
1861	K H Q I S K I I N F G V T Q V F P G R A ACATATACGGCTATTTAATTATCCAAGCAAATAATGGCACAGTTCAAGTATAAGAAA	1920
1921	T Y T A I L I I Q O A N K M A O F K Y K K GTAAGTAATATCAGCAGAACCCCTAGATTCTGAAGAAAATACGTGTGTTATAGCTCA	1980
1981	V S N I S A E T L D S E E N T C V Y S S	2040

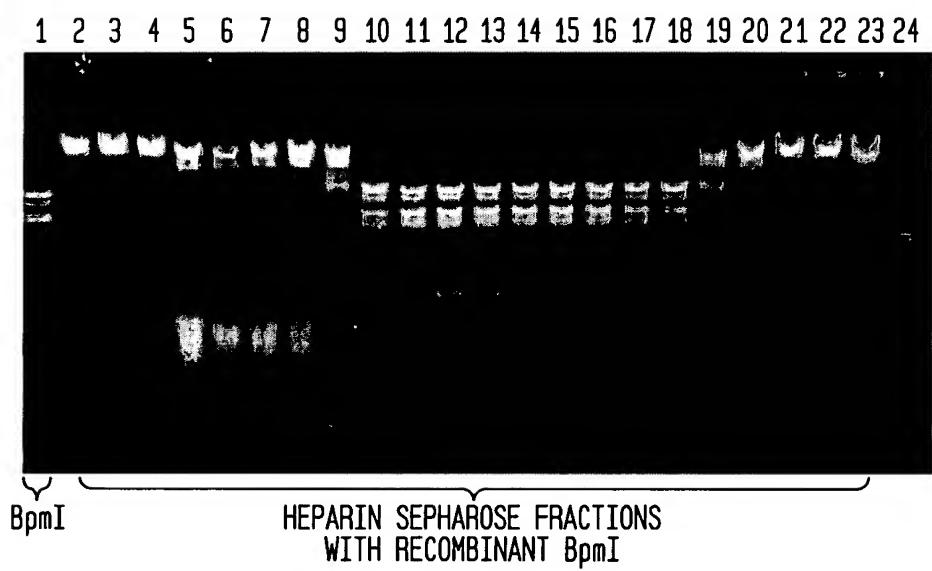
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**FIG. 3C**

2041	GAAAAGTATAATTCTGACCCTTGATATTTTATCTCCTGAAACAGAAGCTGTTTACT	2100
	E K Y N S D P W I F L S P E T E A V F T	
	AAATTACAGAACGCTCAATTGAGAAACTGGAGAAATCACTGATATAAGTAGGACTA	
2101	K F T E A Q F E K L G E I T D I S V G L	2160
	CAAACAAGCGCTGATAAAATATATTTTATTCTGAAAATGAAACTTCAGATACATAT	
2161	Q T S A D K I Y I F I P E N E T S D T Y	2220
	ATATTTAATTATAAAGGGAAAAGATATGAAATAGAAAAATCTATATGTTGCCAGCTATC	
2221	I F N Y K G K R Y E I E K S I C C P A I	2280
	TATGACTTATCTTTGGTCTTTGAAAGCATTAGGGAAATGCACAAATGATATTCCCT	
2281	Y D L S F G S F E S I Q G N A Q M I F P	2340
	TATGAAATCAGAGATGAAGAACGATATCTACTAGAGGAAGAACGCTGAAAATGATTAT	
2341	Y E I R D E E A Y L L E E E T L E N D Y	2400
	CCTCTTGCTTGAATTATTTGAATGAGTTAAAGAAGCTCTGAAAAAGAAGCTTACAA	
2401	P L A W N Y L N E F K E A L E K R S L Q	2460
	GGCCGTAATCCGAAATGGTATCAATATGGTCGGTCCAAAGTTATCAAATTCATGAT	
2461	G R N P K W Y Q Y G R S Q S L S K F H D	2520
	AAAGAAAAACTGATATGGACCGTACTTGCTACGAAACCCCGTATGTACTTGATAGGAAT	
2521	K E K L I W T V L A T K P P Y V L D R N	2580
	AACCTGTTATTTACTGGTGGTGGAAACGGACCGTATTATGGTTAATTAACCAATCTATT	
2581	N L L F T G G G N G P Y Y G L I N Q S I	2640
	TACTCTTGCATTATTTTAGGTATTCTTCACATCCTGTAATAGAAAGTATGGAAAAA	
2641	Y S L H Y F L G I L S H P V I E S M V K	2700
	GCAAGGGCCAGTGAATTAGGGGATCATATTATTCTCATGGAAAACAATTATTGAGAAA	
2701	A R A S E F R G S Y Y S H G K Q F I E K	2760
	ATCCCATTAGAAAGATTGATTTGATGATCAAGATGAGGTAGACAAATATAATACGGTG	
2761	I P I R K I D F D D Q D E V D K Y N T V	2820
	GTCACAACAGTAGAAAAATTAACTTACCGATAGAATTAAAGTGAAGAGCAATGGA	
2821	V T T V E K L I I T T D R I K S E S N G	2880
	CCCCGGAGGAGAATGTTAGAAGAAGGTTAGATGCTTGTCTAATCAACTTATCCAGGTT	
2881	P R R R M L R R R L D A L S N Q L I Q V	2940
	ATTAATGAACCTTATAATATCAGTGACGAAGAATATACGACAGTTGAATGATGAAATG	
2941	I N E L Y N I S D E E Y T T V L N D E M	3000
	TTGACAGCGGCGTTAGGAGAAGAAAAATGA (SEQ ID NO: 3)	
3001	L T A A L G E E K * (SEQ ID NO: 4)	3030

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*FIG. 4*



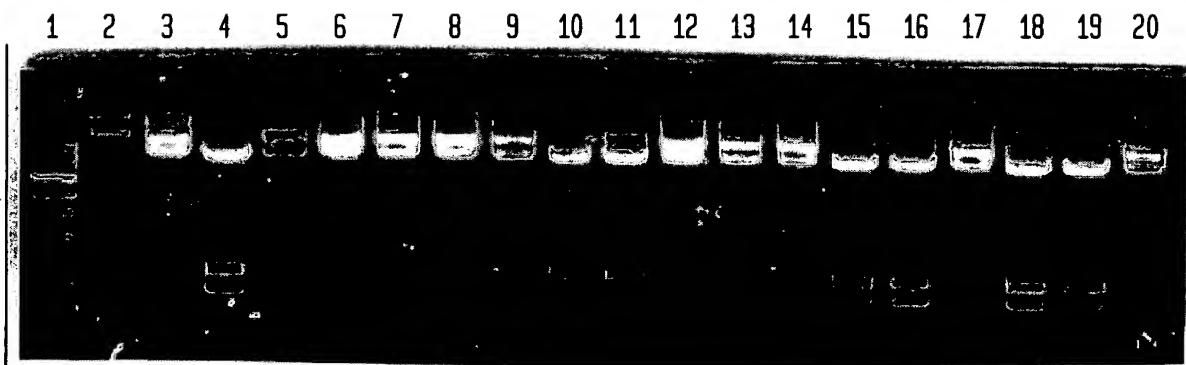
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*FIG. 5*

CATALYTIC	METHYLATION	SPECIFICITY
X I	IV	

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**FIG. 6**



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FIG. 7

M 1 2 3 4 5 6 7 8 9 10 11 12

125

25

62

48

33

25

17

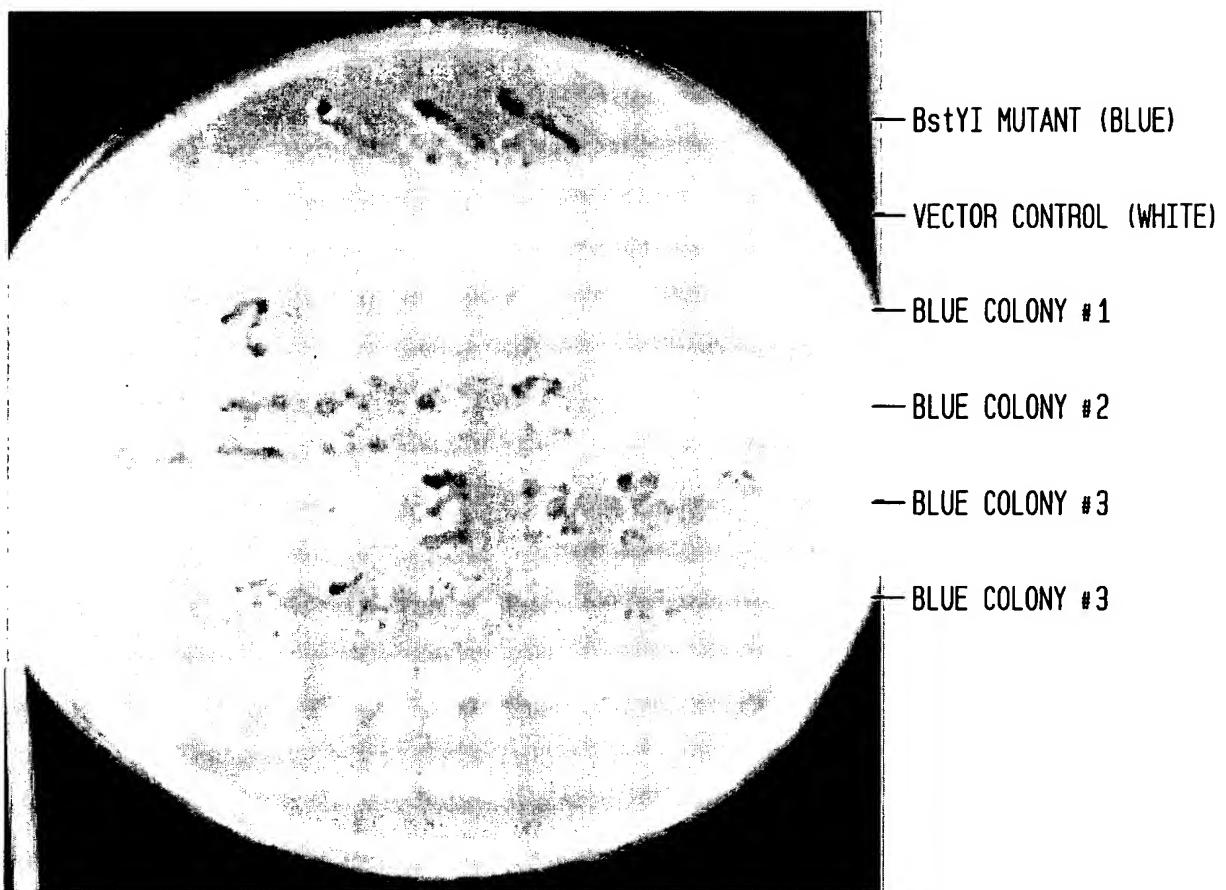
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FIG. 8



NEW SHEET

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FIG. 9

